

# Fruit Varieties in Ohio, IV

## Crab Apples

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AGRICULTURAL EXPERIMENT STATION  
Wooster, Ohio

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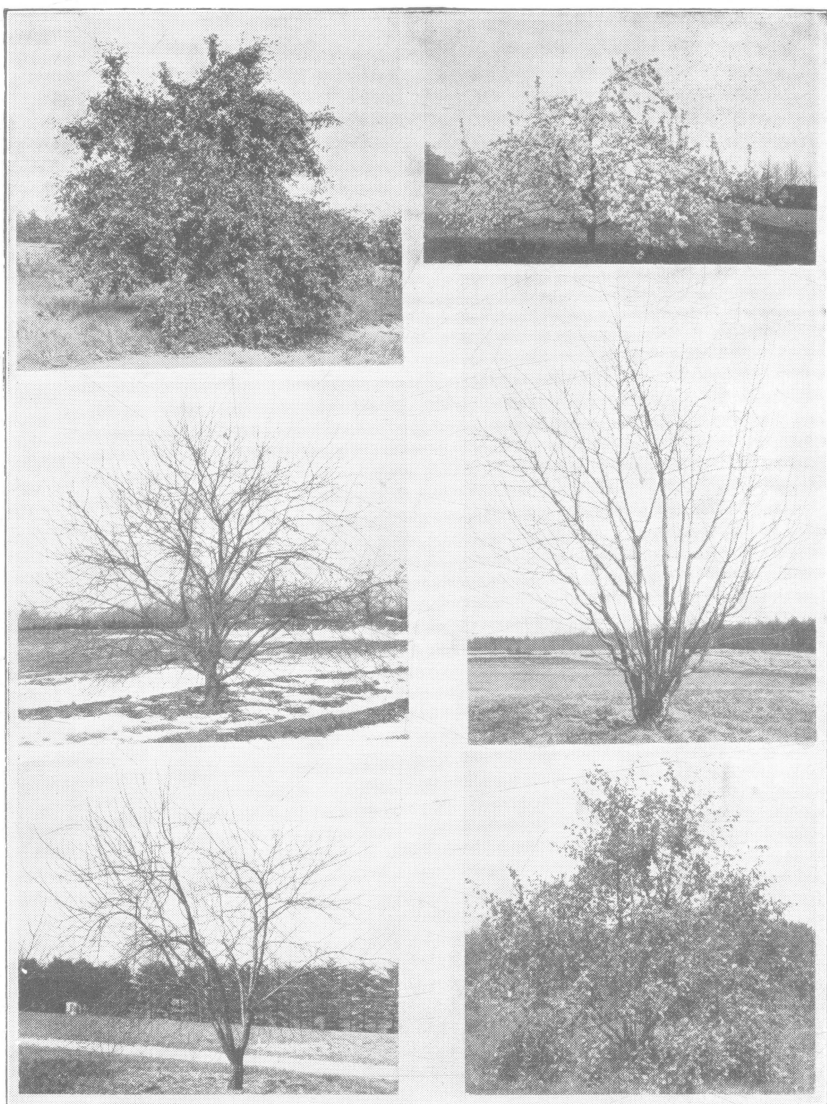


Fig. 1.—Crab apples

Dolga bearing a heavy crop of fruit, recommended for ornamental planting (upper left)

Yellow Siberian, 10 years from planting (middle left)

Gold, 15 years from planting (lower left)

Transcendent, excellent culinary quality, recommended for ornamental planting (upper right)

Whitney, 10 years from planting (middle right)

Hyslop, 11 years from planting, best commercial variety (lower right)

## FRUIT VARIETIES IN OHIO, IV

### CRAB APPLES

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Crab apples are of less importance commercially than they were a quarter of a century ago, when there was demand for them in the manufacture of cider, vinegar, and jelly. The greater use of cull grades of the common apples for cider and vinegar, the manufacture of synthetic vinegar, the development of the soft drink industry, and the manufacture of commercial forms of pectin have materially reduced the demand for crabs. Recent improvement in the manufacture and preservation of cider and its sale in confectionary stores and roadside markets, however, have caused growers to give consideration to the value of crab apples in blending cider.

### ORNAMENTAL VALUE

The value of the cultivated varieties of crab apples for ornamental plantings has not been given the consideration it deserves. The symmetry of tree and beauty of bloom and fruit of several of the cultivated varieties warrant their planting solely for ornamental purposes. Certain of the varieties here described, such as Dolgo, Transcendent, and Hyslop, are especially adapted to ornamental planting. In addition the fruits of these varieties are all of high culinary quality. When crab apples are included in landscape planting, plans should be made either to spray or dust the trees at least three or four times during the season.

### CULTIVATION

Crab apples require the same general treatments as our common apples. Many of the varieties being subject to blight, nitrogenous fertilizers should not be applied so heavily as is the rule with most varieties of apples. The spray treatment and pruning for crab apples are the same as for apples. The trees of most varieties are slower in growth, more upright in habit, and smaller than apple trees, hence the distance between trees need not be more than 30 feet, except such varieties as Yellow Siberian and Whitney which need more space.

The fruit of most varieties hangs on the trees well after ripening. As a result the tendency is to defer picking a little too long. The fruit of some varieties when left on the trees too long develops water core. The remedy for this condition is to pick the fruit as soon as it has attained good color.

#### ORIGIN OF CULTIVATED CRABS

The term "Crab apple" has sometimes been applied to any small-fruited variety of apple. Cultivated crabs are distinguished by the acidity, astringency, and high pectin content of the fruit. The crab apples that have commercial value in this country originated from three species and from hybrids of these species and the common apple, *Pyrus malus*, Linn. The Siberian group, *Pyrus baccata*, Linn, and the hybrids of this species and *Pyrus malus* comprise the largest number of cultivated varieties; in fact all of the better varieties belong to this group. Two native species *Pyrus coronaria*, Linn, of the eastern and northern states, and *Pyrus ioensis*, Bailey, of the northern Mississippi Valley, and the hybrids of these species have supplied the remainder of the cultivated varieties.

*Pyrus coronaria*, the species native to this State, is noted for its fragrant blossoms, which open about two weeks after the common apple. The fruit of this species ripens late in the fall and is too small, astringent, and acid to be of value except for jelly or preserves. *Pyrus ioensis*, the crab native to the upper Mississippi Valley, like *Pyrus coronaria* is acid and astringent but is larger and is also very hardy. Because of its hardiness it has been used in breeding work to secure a hardy strain of apples for the severe winters of the Dakotas and that region. From this species has been developed the Soulard group, containing such varieties as Soulard, Mercer, and Giant.

#### THE SIBERIAN VARIETIES

Several varieties of the Siberian type have been described by horticultural authorities. Perhaps the most common of the Siberian varieties is the Red Siberian which originated in France. During the latter part of the 19th Century and early in the 20th orchards of Red Siberian crabs were not uncommon. These were grown almost exclusively for cider. The fruit is below medium in size but was considered of special value for cider. The trees are upright and under favorable conditions develop to good size and bear heavy crops. Only scattering trees of the variety remain.

The Large Red Siberian is similar to the Red Siberian except it is larger, as the name indicates. The Yellow Siberian described in the following pages is like the Red Siberian in tree and fruit, except the fruit is yellow instead of red.

#### NOTES ON BLOOMING

Reference has already been made to the use of crab apples in ornamental planting. The following notes on date and color of bloom will be of interest in selecting varieties for ornamental planting.

##### COLOR OF BLOSSOMS AND DATE OF FULL BLOOM, AVERAGE OF 5 YEARS, 1923-1927

Variety	Date	Color of petals
Chester	May 11	White
Dart	May 8	Light pink
Dolgo	May 8	White
Excelsior	May 5	White
Early Strawberry	May 8	White
Florence	May 8	White
Giant Wild Crab	May 10	Bright pink
Gold Crab	May 8	Light pink
Hewes Virginia Crab	May 11	White
Hyslop	May 7	White
Ivan	May 4	White
Soulard	May 12	Bright pink
Success	May 6	White
Transcendent	May 7	Light pink
Whitney	May 8	Light pink
Yellow Siberian	May 7	White

For comparison with these dates, the dates of full bloom of the following standard varieties of apples are given as follows:

##### DATE OF FULL BLOOM, AVERAGE, 1923-1927

McIntosh	May 8	Baldwin	May 9	Rome Beauty	May 13
Jonathan	May 9	Delicious	May 9		

#### VARIETIES RECOMMENDED

A recent tabulation of 58 nurseries representing all sections of the country showed 18 varieties of crab apples listed in their catalogs. Few nurseries listed more than 3 varieties. The varieties most frequently cataloged were, Hyslop by 51 of the 58 nurseries, Transcendent by 38, and Whitney by 37. None of the remaining 15 varieties was listed by more than 15 of the nurseries. Florence, Red Siberian, and Martha were listed by 10 or more nurseries.

The rating given the varieties by the nurserymen, judged by the frequency with which they were listed, conforms closely to the experience of this Station.

Hyslop, on account of its quality, bearing habits, and especially because it ripens at a season when crab apples are in demand for jelly, is the best commercial variety.

Transcendent ranks next, being more attractive in appearance than Hyslop. The Transcendent is of excellent quality for jelly, but it ripens a little too early even in northern Ohio to reach the market at the most advantageous time. Transcendent is a very beautiful tree in bloom and also when the fruit is ripening.

Whitney is better than Hyslop or Transcendent for dessert and is larger than those varieties but is less valuable for culinary uses.

In addition to Hyslop, Transcendent, and Whitney, Dolgo seems to be worthy of recommendation. From an ornamental standpoint Dolgo is the most striking of all the varieties tested at the Station. The brilliant color of the fruit makes the tree stand out very prominently. It is also a profuse bloomer in alternate years. While the fruit of Dolgo is not so large as Hyslop or Transcendent it is of fair size and of excellent quality for culinary uses.

The notes on the varieties described in the following pages were for the most part made from trees and fruit from the Experiment Station orchards at Wooster. A few of the descriptions were made from trees and fruit in the orchard of H. C. Price, Newark, Ohio. The list of varieties does not purport to be complete, but embraces the varieties recently tested at the Station.

#### CHESTER

This variety originated in Chester Township, Meigs County, Ohio. Cions of the variety came to the Station from C. S. Gilland, Pomeroy, Ohio. The original tree is about 65 years old and still standing, being the sole survivor of a number of apple trees that grew from the refuse from an old cider mill. The original tree has been producing heavy crops for many years.

Tree: large, vigorous and very productive.

Fruit: medium size, conical oblong; stem short to medium rather heavy; cavity moderate width and depth, acute; calyx large, closed; basin shallow, wrinkled; skin thick, tough; color greenish yellow, splashed and striped with dull crimson; flesh creamy white, hard, crisp, juicy; sharply acid, slightly astringent, good for jelly;

season late August or early September. It is in season with Transcendent, but less attractive than that variety; however the tree is more vigorous than the Transcendent tree.

#### DART

This variety originated in Minnesota from seed of the Tetofsky (Minn. Exp. Sta. Bul. 83). It is a good sized, attractive crab apple but not so valuable as Hyslop.

Tree: medium size, moderately vigorous, upright; bark light brown, almost yellow; blossoms light pink. Moderately productive.

Fruit: medium to large, oblong-conic, broad, regular; stem long, slender; cavity acute, deep; color extending into cavity; calyx large, closed; basin shallow, furrowed and wrinkled; skin thin, smooth, pale yellow, splashed and striped with bright pink; dots white, numerous; flesh creamy white, slightly coarse, juicy; flavor sprightly subacid, slightly astringent; quality fair; season mid-September.

#### DOLGO

This variety was introduced into America from Russia by Prof. N. E. Hansen of the South Dakota Experiment Station in 1897.

Dolgo is one of the most striking of the crab apples, both in tree and fruit. At blooming time the tree is a mass of blossoms. Again in late summer, as the fruit is coloring, the tree is beautiful. The fruit possesses good quality for culinary uses, but the variety is more worthy of consideration as a decorative tree.

Tree: moderately vigorous, upright; branches long and slender; twigs slender; leaves dark green; blossoms white. Productive of heavy crops in alternate years.

Fruit: small, very distinctive, being rounding-conic; stem long, slender; cavity narrow, shallow; calyx medium size, closed and set at the apex of the apple with no appreciable basin; skin yellow, covered with brilliant crimson; dots few, grayish; seeds small to medium, light brown; flesh yellow, coarse, juicy; quality fair, acid; season latter part of August.

#### EARLY STRAWBERRY

This variety came to the Station from a northwestern state. The fruit is attractive, but ripens too early to be of much value. It ripens two or three weeks earlier than Transcendent.

Tree: upright, spreading and fairly vigorous; blossoms white. An alternate producer of fair sized crops.



Fruit: small to medium, oblate-conic; stem long, slender; cavity rather wide, of moderate depth, acuminate; calyx of medium size, closed; basin shallow, wrinkled; skin thin, tough, color yellow, splashed and streaked with bright pink, shading to dull crimson; dots gray, prominent on well colored specimens; flesh creamy white, tender, melting, coarse, color often extending into flesh; flavor subacid; quality fair; ripens early part of August.

#### EXCELSIOR

This variety, like Whitney, is one of the crab apples that has good quality for dessert. It is also one of the largest of the crabs. It originated with Peter M. Gideon of Minnesota and is said to be a seedling of Wealthy.

Tree: large, upright; leaves large, broad. Productive.

Fruit: large, round ovate to slightly conic; stem slender, long; cavity narrow and somewhat moderately deep; calyx large, closed; basin medium depth, furrowed; skin thin, tender; color lemon yellow, overspread with blotches and streaks of pink; flesh white, fine grained, tender, crisp, juicy; flavor sprightly subacid; season early September.

#### FLORENCE

Like Excelsior this variety was originated by Peter M. Gideon. The fruit is attractive and of about the right size for preserves but it ripens a little early.

Tree: moderately vigorous and spreading. Twigs long and slender. Produces heavy crops in alternate years. Blossoms very fragrant.

Fruit: medium size, oblate, irregular, unsymmetrical; stem long, slender; cavity large, wide, deep, acute, regular; calyx medium size, closed; basin wide, shallow, obtuse, slightly furrowed; skin pale yellow, washed, striped with pink to brilliant crimson with a rather heavy lilac bloom; dots scattering, white; seeds large, flattened, dark brown; flesh yellow tinged with pink near skin, coarse, somewhat juicy; quality fair, acid; season early August.

#### GIANT WILD

This variety was introduced in 1917 by the South Dakota Horticultural Society. In Bulletin 224 of that Station, N. E. Hansen refers to this variety as follows: "Probably the largest wild crab found thus far. Good specimens run three inches in diameter." The variety originated in Illinois. It apparently

belongs to the *Pyrus Soulardi* group. As grown at Wooster the variety is characterized by large size, deep green color, and a quince-like aroma. When stewed it makes a preserve-like sauce. Any value the variety may have would seem to be for jelly and for ornamental planting, the blossoms being bright pink.

Tree: medium size, vigorous, spreading; twigs long and slender; blossoms bright pink.

Fruit: large, round to round-oblate; stem short to medium length; cavity very narrow and shallow, sometimes lipped; calyx closed; basin medium width, rather deep, abrupt, furrowed; skin thick, tough, sometimes roughened by scarfskin, becoming waxy in storage; color green and retained color even when maturing; seeds medium size, dark brown, acute; flesh greenish white, tough coarse, juicy; flavor sharp acid, astringent; quality good for jelly; season late winter.

#### GOLD

This variety originated in Illinois and was first offered to the trade about 1910. Two trees set at Wooster in 1912 at the end of 16 years had produced a total of 41.3 bushels, or 20.7 bushels per tree. This is one of the earliest crabs. The only value it would seem to possess would be for preserves or marmelade, and possibly to use in blending cider early in the season. The variety has a tendency to water core and the skin is very tender.

Tree: medium in size; spreading and drooping; productive of heavy and moderate sized crops in alternate years. The color of the blossoms is light pink.

Fruit: medium size, oblate to oblong-conic; stem slender, long; cavity narrow, abrupt, deep; calyx small, closed; basin very shallow, wrinkled; skin thin, smooth; color greenish yellow, turning to golden yellow with maturity; flesh yellow, coarse, juicy; flavor subacid to rather acid; quality good for preserves or marmelade. Season mid-August.

#### HEWES VIRGINIA

Most likely originated in the South. As grown at this Station it is inferior to many other varieties.

Tree: moderately vigorous, spreading, drooping; branches slender, willowy; productive of good sized crops annually.

Fruit: small, round, flat; stem long, slender; cavity narrow, medium depth; calyx small, open; basin shallow, wide, wrinkled; skin thick, tough, roughened by large gray dots; color yellow,

striped with purplish red in well colored specimens, extending into flesh; seeds small, light brown; flesh crisp, coarse, juicy; flavor acid, astringent; quality fair; season mid-winter.

#### HYSLOP

The origin of this variety is not known. It is, however, one of the older cultivated varieties. This is the best of all the varieties under trial at this Station for commercial uses. It is universally cataloged by nurserymen, and has probably had wider distribution than any other variety. Ripening in mid-September, it reaches the market when crab apples are most in demand.

Tree: medium size, moderately vigorous, upright at first but becoming spreading; branches slender; twigs moderately stout; leaves dark green, large, oval, bark brownish olive to dark gray; blossoms white. Comes into bearing slowly but is productive.

Fruit: medium size, round ovate to oblong; stem long, slender; cavity narrow, shallow, sometimes lipped; calyx medium size; basin shallow, wide furrowed and wrinkled; skin pale yellow covered with dark red, overspread with thick bluish bloom; dots small, white, numerous; flesh yellow, firm, juicy, subacid, astringent; season mid-September.

#### IVAN

This variety was introduced by the South Dakota Horticultural Society in 1916. It is one of the many seedlings which has been produced by the South Dakota Experiment Station. It is of no value in this State. Prof. N. E. Hansen, horticulturist of the South Dakota Experiment Station says, in Bulletin No. 224 of that station, of this variety, "Noteworthy for the calyx segments being absent the same as in the pure Siberian Crab (*Pyrus baccata*)."

Tree: only moderately vigorous, spreading.

Fruit: medium size, oblate, irregular; stem long, slender; cavity medium width, acuminate; calyx closed or partly open, lobes medium length or quite often missing entirely; basin medium depth and width, abrupt; skin tough, roughened by scarfskin; color yellow, splashed and streaked with light carmine; seeds medium, light brown; flesh yellow, crisp, coarse, juicy; flavor rather acid; season mid-September.

#### MARTHA

This variety was originated by Peter Gideon of Excelsior, Minnesota and has been in cultivation more than 50 years. While generally classed as one of the good varieties, it has never been very generally planted in this State.

Tree: moderately vigorous and spreading.

Fruit: medium size, round oblate; stem long, slender; cavity wide, moderate depth; calyx small, closed; basin shallow, wide; skin thin, tough, smooth; color yellow, striped and blotched with bright red; seeds small, acute; flesh firm, yellow, crisp, coarse grained; flavor subacid; quality good; season September.

#### RUBY

This variety is represented only by grafts in the Station orchard. The cions came from an Ohio fruit grower. It probably originated in this State and has never been widely disseminated.

Fruit: medium size, round, inclined to truncate; stem long, moderately stout and set at an angle; cavity wide, obtuse, medium to shallow; calyx medium size, usually closed; basin wide and deep, abrupt; skin pale yellow, nearly overspread with bright scarlet, shading to deep red, rather heavy bloom; seeds numerous, dark brown; flesh pale yellow with shadings of orange or pink, crisp, tough; quality fair to good; season later part of September.

#### SOULARD

This particular variety is a representative of the *Pyrus Ioensis* species and is a native of the Middle West. It is similar to Giant Wild crab in quality except that the fruit is smaller than that variety. It is of no value commercially in this State. Blossoms are very attractive, being bright pink.

Tree: moderately vigorous, spreading; twigs short, stout. Produces good crops biennially.

Fruit: medium size, round, oblate, sometimes oblong; stem medium length, slender; cavity narrow, shallow, sometimes lipped; calyx small, closed; basin medium width and depth, abrupt, wrinkled; skin thick, tough, smooth, waxy; color green becoming greenish yellow with maturity; seeds medium size, plump, acute, dark brown; flesh greenish white, tough, coarse, juicy; flavor sharply acid, astringent; season late winter.

#### SUCCESS

Success is another of the many varieties introduced from the northwest in recent years. Being in season here with Hyslop, it cannot be recommended.

Tree: upright, becoming spreading, small; bark light brown; leaves large, broad, light green; blooms early. Moderately productive.

Fruit: medium size, round ovate, sometimes inclined to conical; stem medium to long, slender; cavity medium width and depth; calyx medium size, closed; basin very shallow, wrinkled; skin pale yellow, covered with bright crimson to dark red on exposed portions, flesh yellow, firm, juicy; quality subacid, astringent; season mid-September.

#### TRANSCENDENT

The origin of this variety is unknown. It is one of the oldest varieties in cultivation and remains one of the most popular. Except for the fact that it ripens a little too early it would be the leading variety in this State. It is more attractive than Hyslop, but because Hyslop ripens two or three weeks later than Transcendent, the former is given preference for commercial plantings.

Tree: medium size, moderately vigorous, spreading, drooping; branches stout, willowy; productive of good crops annually, comes into bearing young; blooms very profusely and makes an attractive tree for ornamental planting. Rather subject to fire blight.

Fruit: medium size, oblate, irregular, ribbed, suture prominent on many specimens; stem long, slender; cavity narrow, rather shallow, obtuse; calyx large, closed, lobes long; basin shallow, furrowed; skin thin, yellow, nearly covered with bright red bloom on highly colored specimens; seeds small, light brown; flesh yellow, crisp, juicy, fine grained, slightly astringent; quality subacid, excellent for culinary uses; season about September.

#### WHITNEY (Whitney No. 20)

This variety originated with A. E. Whitney of Illinois and was described by Warder in 1869. It ranks with Hyslop and Transcendent in popular esteem in most sections of the country. It is the most popular of the larger varieties of crabs.

Tree: upright; branches divergent; twigs of medium size, characterized by numerous gray lenticels; bark light brown; leaves medium to large, oval; almost an alternate producer.

Fruit: large, round, conic; stem slender and of medium length; cavity moderate width and depth; calyx medium to large, open; basin broad, shallow; skin lemon yellow, striped and splashed with dull red; flesh yellow, crisp, mild, subacid, very good; season early September.

**YELLOW SIBERIAN (Golden Beauty)**

The origin of this variety is not known, but because of the similarity in quality of fruit and tree characteristics it is thought to be a seedling of the Red Siberian. It is surpassed in quality by many other varieties.

Tree: upright, fairly vigorous; branches slender and willowy. Produces a good crop biennially.

Fruit: small, round oblate, irregular; stem long and slender; cavity acute, medium depth and width; basin only a slight depression; calyx medium, closed; skin smooth, yellow, blushed with red; flavor acid, astringent; season early September.